

1. A child presented with erythematous non blanching bosselated lesion on left side of face. What is the treatment of choice in this child?

a) Erbium laser

b) Nd-YAG laser

c) Flash light pumped dye laser

d) Q ruby laser

### Correct Answer - C

This child is suffering from port wine stain the most common vascular malformation.

The treatment of choice of early and intermediate port wine stain is use of flash light pumped dye laser.

The pulsed dye laser produces a light with a specific wavelength of 585 or 595 nanometers. This beam is selectively absorbed by red-pigmented material such as hemoglobin in the blood vessels of the lesion.

This produces selective heat destruction of these structures, and the treated area becomes whiter.

**Port wine stain** commonly appear on the face as flat patchy lesions that are reddish to purple in color.

When present on the face, they are located in areas supplied by the sensory branches of the fifth (trigeminal) cranial nerve.

2. A 6 month old child presented with diarrhea for few days. He had dermatitic lesions on his hands and feet. Scalp hair was comparatively less. Deficiency of zinc was suspected. TRUE about acrodermatitis enteropathica is:

a) Autosomal recessive

b) Autosomal dominant

c) Zinc treatment cures partially

d) Treatment life long

Correct Answer - A

**Acrodermatitis enteropathica (AE):**

- It is an **autosomal recessive** disorder of zinc absorption.
- It presents in infancy, characterized by a **triad of acral dermatitis (face, hands, feet, anogenital area), alopecia, and diarrhea.**
- These infants have a defect in an intestinal zinc transporter, the human ZIP4 protein encoded on the SLC39A4 gene.
- Mutations in this gene prevents appropriate enteral zinc absorption.
- AE classically presents during infancy on weaning from breast milk to formula or cereal, which have lower zinc bioavailability than breast milk.

**Ref:** Jen M., Yan A.C. (2012). Chapter 130. Cutaneous Changes in Nutritional Disease. In L.A. Goldsmith, S.I. Katz, B.A. Gilchrest, A.S. Paller, D.J. Leffell, N.A. Dallas (Eds), Fitzpatrick's Dermatology in General Medicine

3. A 36-year-old factory worker developed itchy, annular scaly plaques in both groins. Application of a corticosteroid ointment led to temporary relief but the plaques continued to extend at the periphery. The most likely diagnosis is:

a) Erythema annulare centrifugum

b) Granuloma annulare

c) Annular lichen planus

d) Tinea cruris

Correct Answer - D

Tinea cruris is dermatophytic infection of groin.

Presence of bilateral annular scaly plaques in the groin, itching and unresponsiveness to steroids and peripheral extension leads to diagnosis of Tinea cruris.

The infection causes itching or a burning sensation in the area which is affected. Most likely originating from the groin, thigh skin folds or anus.

Affected areas may appear reddish, tan, or brown, with flaking, rippling, peeling, iridescence, or cracking skin

The acute infection begins with an area in the groin fold about a half-inch across, usually on both sides.

**Ref:** Anthony Du Vivier, Phillip H. McKee, Chapter 15, "Superficial Fungal Infections", In the book, "Atlas of Clinical Dermatology", Elsevier Publication, 2002, 3rd Edition, Spain, Page 320

**4.** Which of the following is a characteristic feature of Borderline leprosy?

a) Inverted saucer appearance

b) Erythema Nodosum Leprosum

c) Presence of hypopigmented plaques all over the body

d) Glove and Stocking sensory symptoms

**Correct Answer - A**

In borderline leprosy, lesions are characteristically erythematous, raised plaques with central clearing and sloping edge (inverted saucer appearance).

Lesions are multiple, hypoaesthetic and are distributed asymmetrically.

Patients also develop asymmetrically thickened several nerves and is Type 1 leprae reaction positive.

**Ref:** Illustrated Synopsis of Dermatology and Sexually Transmitted Diseases By Neena Khanna 2ND edn page 225.

**5.** All of the following are true about incontinentia pigmenti, except:

a) Ocular involvement is seen in almost 100% cases and is typically unilateral

b) Avascularity of peripheral retina

c) Primary skin abnormality

d) X-linked dominant

**Correct Answer - A**

Ocular involvement is seen in about 20-35 percent of the cases of incontinentia pigmenti but not in 100 percent cases as mentioned in the option. Incontinentia pigmenti is a X-linked dominant primary skin disease that leads to avascularity of the retina.

**Ref:** Rook's Textbook of Dermatology 7th Edition, Pages 39.20-3.22; The Retinal Atlas By Lawrence A. Yannuzzi, Page 38

6. Child presents with linear verrucous plaques on the trunk with vacuolation of keratinocytes in S.Spinosum and S.Granulosum. Diagnosis is?

a) Incontinentia pigmenti

b) Delayed hypersensitivity reaction

c) Verrucous epidermal nevus

d) Linear darier's disease

Correct Answer - C

**Verrucous epidermal nevus** is also known as *linear verrucous epidermal nevus or linear epidermal nevus*.

They are characterized by localized or diffuse, closely set, skin-colored, brown, or gray-brown verrucous papules, which may coalesce to form well-demarcated papillomatous plaques.

Extensive distribution of a verrucous epidermal nevus is termed systemized epidermal nevus.

Epidermal nevi may present in conjunction with other epidermal lesions such as café-au-lait macules, congenital hypopigmented macules, and congenital nevocellular nevi.

Complete excision of an epidermal nevus to the level of the deep dermis is necessary to prevent recurrences.

**Ref:** Thomas V.D., Snavey N.R., Lee K.K., Swanson N.A. (2012). Chapter 118. Benign Epithelial Tumors, Hamartomas, and Hyperplasias. In L.A. Goldsmith, S.I. Katz, B.A. Gilchrest, A.S. Paller, D.J. Leffell, N.A. Dallas (Eds), *Fitzpatrick's Dermatology in General Medicine*, 8e.

7. In congenital dystrophic variety of epidermolysis bullosa, mutation is seen in the gene coding for:

a) Laminin 4

b) Collagen type 7

c) Alpha 6 integrin

d) Keratin 14

Correct Answer - B

**Dystrophic Epidermolysis Bullosa (DEB):**

It is a spectrum of dermolytic diseases where blistering occurs below the basal lamina; healing is therefore usually accompanied by scarring and milia formation—hence, the name dystrophic.

***There are four principal subtypes, and all are due to mutations in anchoring fibril type VII collagen.***

Anchoring fibrils are therefore only rudimentary or absent.

Of the four main types of DEB, dominant DEB or Cockayne-Touraine disease and recessive DEB (RDEB) are important.

There is as yet no causal therapy for EB, but gene therapy is being investigated.

**Ref:** Suurmond D. (2009). Section 6. Bullous Diseases. In D. Suurmond (Ed), *Fitzpatrick's Color Atlas & Synopsis of Clinical Dermatology*, 6e.

**8. An infant presented with erythematous lesions on cheek, extensor aspect of limbs, mother has history of bronchial asthma, the probable diagnosis is**

a) Air borne contact dermatitis

b) Atopic dermatitis

c) Seborraehic dermatitis

d) Infectious eczematoid dermatitis

Correct Answer - B  
B i.e. Atopic Dermatitis

## 9. Only definitive indication of systemic steroids in psoriasis is

a) Pustular psoriasis

b) Erythroderma

c) Psoriatic arthropathy

d) Impetigo herpetiformis

Correct Answer - D

D i.e. Impetigo herpetiformis

- Systemic steroids *should be avoided in routine care of psoriasis* because the disease usually breaks through, *requiring progressively higher doses to control symptoms* and withdrawal of drug is usually associated with frequent relapse in form of *life threatening erythrodermic psoriasis (with exfoliative dermatitis) and pustular psoriasis (with pus lakes)*.

- However, systemic steroids may have a role in management of *Persistent, otherwise uncontrollable (e.g. with metabolic complications), psoriatic erythroderma and in fulminant generalized pustular psoriasis (von Zumbusch type) if other drugs are ineffective or contraindicated*.

2. Pustular psoriasis in pregnancy is called impetigo herpetiformis. *In pregnancy, safest drug for treatment of pustular psoriasis is prednisolone*.

3. *Severe psoriatic polyarthritis threatening severe irreversible joint damage*.

*Pustular psoriasis may develop after strong topical or systemic steroids have been used and then abruptly withdrawn. It presents with development of generalized pustules all over the body.*

*Erythematous skin rash with multiple pus lakes suggests a diagnosis*

of generalized pustular psoriasis. As retinoids, methotrexate & PUVA cannot be used (or contraindicated) in pregnancy. *Corticosteroids form the mainstay of treatment for generalized pustular psoriasis in pregnancy. Localized disease is best treated with topical steroid & fulminating generalized disease is best treated with systemic prednisolone (oral).*

## 10. Intra epidermal blisters are seen in:

a) Bullous pemphigoid

b) Pemphigus foliaceus

c) Dermatitis herpetiformis

d) Bullous SLE

Correct Answer - B  
B i.e. Pemphigus foliaceus

## 11. Neonatal fat necrosis (subcutaneous fat necrosis of newborn) resembles:

- a) Erythema induratum
- b) Post-steroidal panniculitis
- c) Lupus panniculitis
- d) Lipodermatosclerosis

Correct Answer - B

B i.e. Post-steroidal panniculitis

Histology of Post-steroidal panniculitis is very similar to that of subcutaneous fat necrosis of newborn, in that *needle shaped crystals may be found within lipocytes & histiocytes*.

Subcutaneous fat necrosis of newborn occurs in infants treated acutely with high doses of systemic steroids during withdrawal. It is inflammatory process involving areas of abundant sub cutaneous fat (discrete nodules) with good prognosis. The steroid reinstated & tapered slowly. Scleroma neonatorum is non inflammatory, rapidly progressive, diffuse, non tender hardening of subcutaneous tissue seen in sick infants with recurrent or persistent hypothermia. It has poor prognosis.

**12. A 45 year old male had multiple hypoaesthetic mildly erythematous large plaques with elevated margins on trunk and extremities. His ulnar and lateral popliteal nerves on both sides were enlarged. The most probable diagnosis is:**

a) Lepromatous leprosy

b) Borderline leprosy

c) Borderline tuberculoid leprosy

d) Borderline lepromatous leprosy

Correct Answer - D

**Ans: D i.e. Border line lepromatous leprosy**

The patient here has multiple hypoaesthetic patches (seen in borderline leprosy) and bilateral symmetrical nerve thickening (suggestive of lepromatous leprosy). Now in lepromatous leprosy, there is normal anesthesia. Hence, the patient fits in the category of borderline lepromatous leprosy.

"Borderline Lepromatous Leprosy: Skin lesions are often hypoaesthetic or anesthetic, but not necessarily so. Nerve trunk palsies have their highest prevalence in BL disease, but are variable in number; ranging from none to serious neurologic deficits, both motor and sensory, in all four extremities. Involvement of both median and ulnar nerves, not infrequently bilateral, is characteristic

**13. An 8-year-old boy presents with well defined annular lesion over the buttock with central scarring that is gradually progressive over the last 8 months. The diagnosis is**

a) Annular psoriasis

b) Lupus Vulgaris

c) Tinea Corporis

d) Chronic granulomatous disease

Correct Answer - B

B i.e. Lupus vulgaris

Annular plaque with central scarring - Typically seen in Lupus vulgaris.

Most common sites in India = Buttocks and face.

**Cause:**

- The underlying focus of TB (bone, joint or lymph node).
- Contiguous extension of disease from underlying affected tissue.
- By hematogenous or lymphatic spread.
- Arise after exogenous inoculation.
- A complication of BCG vaccination.

**Features & manifestations:**

- Cutaneous TB more commonly affects buttocks & extremities rather than the face.
- Such a pattern is usually due to reinoculation and may relate to playing without clothing or shoes.

**Lesions:**

- Becomes flat plaques with a serpiginous or polycyclic outline & a smooth surface or psoriasiform scaling: there may be erosions, ulceration, and scarring.
- Hypertrophic forms appear as a soft mass with a nodular, hyperkeratotic surface.

## 14. Fine reticular pigmentation with palmar pits are seen in :

- a) Dowling-Degos disease
- b) Rothmund Thomson syndrome
- c) Cockayne syndrome
- d) Bloom's syndrome

Correct Answer - A

A i.e. Dowling-Degos disease

Dowling-Degos disease presents as *asymptomatic post-pubertal, symmetrical, progressive, reticular pigmentation involving flexural-areas (flexor folds) with scattered comedo like lesions (dark dot follicles) and pitted aceniform scars near angles of mouth*.

Reticular acropigmentation of kitamura presents with reticular freckle like pigmentation on dorsal hands, palmar pits and breakage of epidermal ridge pattern.

Cockayne's syndrome, Bloom's syndrome and Rothmund-Thomson syndrome are genodermatoses with defective DNA repairing, presenting as photo sensitivity.

Dowling-Degos disease Dowling-Degos disease (reticular pigmented anomaly of flexures) is a rare *autosomal dominant genodermatoses* usually presenting *post pubertally* with *multiple small, round pigmented macules* that resemble freckles. *Pigmentation is symmetrical and progressive*; and the lesions become progressively more numerous and *reticulate with time*. It characteristically *involves flexurals areas* e.g: axillae, groins (mc sites), intergluteal/ infra-mammary folds, neck, scalp, trunk, arms and genitals. Except pigmentation, it is otherwise asymptomatic (rarely pruritic). *Scattered comedo like lesions (dark dot follicles) pitted acneiform scars near*

*angels of mouth* and hidradenitis suppurativa are other features. *Histology is diagnostic*, with a distinctive form of *acanthosis*, characterized by an *irregular elongation of rete ridges*, with a *concentration of melanin at the tips (filiform down growths in epidermis with hyperpigmentation of deepest areas)*; the melanocyte count being normal. It involves follicular infundibulum with follicular plugging in some cases.

Reticulate acropigmentation of Kitamura Reticulate acropigmentation of kitamura is characterized by a *reticulate network of freckle like areas of pigmentation* which develop on *dorsa of hands* in first 2 decades, which may subsequently involve most parts of body. *Palmar pits and breakages of epidermal ridge pattern are found*. Histologically, the pigmented macules show *epidermal atrophy and increased number of melanocytes*.

Hereditary symmetrical dyskeratosis of extremities (reticulate acropigmentation of Dohi) is AD disorder presenting in infancy or early childhood as mottled pigmentation with areas of depigmentation on *dorsa of hands and feet or arms and legs*.

#### **Haber's syndrome**

- Haber's syndrome is a familial condition characterized by *persistent/permanent rosacea like eruption (i.e. facial flushing, erythema, telangiectasia, prominent follicles, comedones, small papules and tiny atrophic pitted areas)* associated in some cases with *static, scaly/keratotic, flat, non-indurated plaques on trunk and limbs*.

#### **Bloom's syndrome**

Bloom's syndrome (congenital telangiectatic erythema and stunted growth) is a AR disorder characterized by *photosensitive telangiectatic facial erythema* during infancy or early childhood (superficially resembling lupus erythematosus), *moderate and proportionate growth deficiency* both in utero and postnatally, *unusual facies* (narrow, slender, delicate face with a narrow, prominent nose, hypoplastic malar areas, receding chin and microcephaly and dolichocephaly i.e. long and narrow head). Patients are *predisposed to multiple infection (d/t immune dysfunction)* and *early cancers* (usually interanal) lit early death (usually neurological development *is normal*; diabetes mellitus and

testicular atrophy are common.

### **Cockayne's syndrome**

Cockayne's syndrome is AR degenerative disease with *cutaneous* (photosensitivity, premature skin aging), ocular (pigmentary retinal degeneration with salt-pepper appearance of retina, optic atrophy and cataract), *neurological* (sensorineural deafness, progressive neurological degeneration, extensive primary demyelination, peripheral neuropathy, normal pressure hydrocephalus, microcephaly, intellectual deterioration) and somatic abnormalities (postnatal growth failure, cachectic dwarfism with disproportionately long limbs with large hands and feet and ears). Child usually appears normal for the first year, when photosensitive butterfly facial erythema develop 1/ t mottled pigmentation, atrophic scars giving patient a *prematurely senile appearance* which is enhanced by marked loss of subcutaneous fat on face (*wizened appearance*) and *sunken eyes* with typical *bird headed facies* and *prominent Mickey mouse ear*.

In contrast to xeroderma pigmentosa, CS *don't have increased incidence of skin cancer and infection* and the CS patients have unusual facies, demyelination with delayed nerve conduction velocity and normal level of global NER.

### **Rothmund Thomson Syndrome**

Rothmund Thomson syndrome (congenital poikiloderma), an AR disorder is characterized by poikiloderma with variegated cutaneous pigmentation, atrophy and telangiectasia beginning in infancy (but not birth). Cheeks are first and most severely involved but face, *buttock and extremities are also involved*. *Photosensitive erythema* and facial smelling may be accompanied by blister formation. Scalp hair, eyebrows, eyelashes, pubic and axillary *hair are often sparse or absent*. *Juvenile cataract (b/l)*, *proportionate stunted growth* with slender delicate limb, small hands, feet and finger; *bird like small skull with a saddle nose*, *skelatel abnormalities* including radial ray defect (present as thumb hypoplasia, abnormal radial head or absence of radius) and a *predisposition for cancer* especially *osteosarcoma* (30%). Intelligence is normal and life expectancy depends on development of cancer; otherwise it appears to be normal.

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**15. A child presented with complaint of severe itching over the web of fingers, more at night. Examination revealed burrows. Most probable diagnosis is:**  
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a) Tinea cruris

b) Scabies

c) Infantile eczema

d) Papular urticaria

Correct Answer - B

**Ans. B: Scabies**

Scabies is essentially a disease of the children. The itching appears a few days after infestation. It may occur within a few hours if the mite is caught a second time.

The itch is characteristically more severe at night and affects the trunk and limbs.

It does not usually affect the scalp.

Burrow is the pathognomic lesion of scabies.

Scabies burrows appear as tiny grey irregular tracks between the fingers and on the wrists.

They may also be found in armpits, buttocks, on the penis, insteps and backs of the heels. Microscopic examination of the contents of a burrow may reveal mites, eggs or mite faeces (scybala).

**16. A child develop skin tumor ss na blisters on exposure to sunlight. Irregular dark spots on the skin were also found. He is very likely has defect in which of the following mechanism**

a) Thymidine dimmers repair

b) Base excision repair

c) Mismatch repair

d) Double strand break repair

Correct Answer - A

Ans. a. Thymidine dimmers repair

**17. A young man presents with asymptomatic macules and erythematous painless lesion over glans with generalised lymphadenopathy. Treatment of choice in this condition:**

a) Ceftriaxone

b) Benzathine penicillin

c) Acyclovir

d) Fluconazole

Correct Answer - B  
Ans. b. Benzathine penicillin

**18. A patient has oral ulcer and skin bullae, which are slow to heal. The lesion is**

a) Intra-dermal

b) Suprabasal

c) Epidermal

d) Sub corneal

Correct Answer - B

Ans. b. Suprabasal

- Bulla on body and oral mucosa in a 50 years old male is suggestive of Pemphigus vulgaris.

**Pemphigus vulgaris:**

- Characterized by cutaneous (thin walled, delicate and flaccid bulkier and mucosal blisters).
- Mucosal lesions are present in all patients, oral mucosa most frequently involved, painful erosions extend peripherally with shedding of mucosa<sup>Q</sup>.
- Bulla is intra-epidermal, the split being suprabasal<sup>Q</sup>.
- Presence of acantholytic cells (rounded keratinocytes<sup>Q</sup> present in the blister cavity and at the edge of the blister) with row of tombstone appearance

**Types of Bullae  
Intra-Epidermal**

- Pemphigus<sup>Q</sup>
- Herpes simplex/zoster<sup>Q</sup>
- Molluscum contagiosum<sup>Q</sup>
- Variola/varicella<sup>Q</sup>
- Eczema<sup>Q</sup>

- Darriers disease<sup>Q</sup>

- Miliria rubra<sup>Q</sup>

- Pompholyx<sup>Q</sup>

**Sub-Epidermal**

- Pemphigoid<sup>Q</sup>

- Dermatitis herpetiformis<sup>Q</sup>

- Herpes gestationalis<sup>Q</sup>

- Burns<sup>Q</sup>

- Erythema multiforme<sup>Q</sup>

- Epidermolysis b.ullosa Lichen planus bullosa<sup>Q</sup>

**19. A man has recurrent urticaria following exercise and coming out in sun.**

**Diagnosis is:**

a) Cholinergic urticaria

b) Atopic reaction

c) Photo dermatitis

d) Chronic idiopathic urticaria

Correct Answer - A

Ans. a. Cholinergic urticaria

- Cholinergic urticaria develops due to acetyl choline liberated from post ganglionic cholinergic enervated sweat glands under the influence of any stimuli which induces sweating by increasing core body temperature<sup>Q</sup>.
- Precipitating factors are exercise/physical exertion<sup>o</sup>, emotion upset<sup>o</sup>, exposure to sun/heat<sup>o</sup> and hot bath/food<sup>Q</sup>

**Physical Urticaria**

- Dermographism
- Solar urticaria
- Cold urticaria
- Cholinergic urticaria

**Dermographism**

- This is exaggerated triple response of lewis<sup>Q</sup>.
- In some patients of urticaria mark easily when their skin is scratched or rubbed with a blunt object<sup>Q</sup>
- It is not influenced by an atopic diathesis a.nd has a duration of less than 5 years.

**Urticaria Vasculitis**

- Transient° but rarely it may stay for days rather than hours and leave a brownish stain.

- It is due to involvement of small vessels<sup>Q</sup>

### **Urticaria pigmentosa/Mastocytosis**

- There are excess mast cells° in many tissues but mainly manifest in the skin<sup>Q</sup>
- Multiple pink or red brown macule or papule<sup>Q</sup> develops over the trunk and limbs.
- Lesions may be intensely itchy and patient may experience discomfort and erythema when bathing.
- Rubbing or heating may result in its swelling and a red halo-Darrier's sign<sup>Q</sup>
- Sometimes alcohol, opioids or other drugs may cause histamine release from visceral mast cell deposits

### **Cholinergic Urticaria**

- Urticaria develops due to acetyl choline liberated from post ganglionic cholinergic enervated sweat glands under the influence of any stimuli which induces sweating by increasing core body temperature<sup>Q</sup>.
- Characteristic feature is small size pruritic wheals surrounded by large erythema<sup>Q</sup>

### **Precipitating Factors**

- Exercise/Physical exertion<sup>Q</sup>
- Emotion upset<sup>Q</sup>
- Exposure to sun/heat<sup>Q</sup>
- Hot bath/food<sup>Q</sup>

**20. A young boy had itchy, excoriated papules on the forehead and the exposed parts of the arms and legs for three years. The disease was most severe in the rainy season improved completely in winter. The most likely diagnosis is**

a) Insect bite hypersensitivity

b) Scabies

c) Urticaria

d) Atopic dermatitis

Correct Answer - A

Ans. a. Insect bite hypersensitivity

A young boy had itchy, excoriated papules on the forehead and the exposed parts of the arms and legs for three years. The disease was most severe in the rainy season improved completely in winter. The most likely diagnosis is insect bite hypersensitivity.

**Insect Bite Hypersensitivity:**

- Predominance of lesions on exposed part of body indicate the role of an external agent in the causation rather than an endogenous agent
- Increased incidence in rainy season as insect bites are more common in rainy season due to increased breeding

**21. A 27-year old sexually active wife of a long distance truck driver presented with copious vaginal discharge of 2 days duration. According to the syndromal management of vaginal discharge. which of the following would be given to her**

a) Azithromycin + Metronidazole + Fluconazole

b) Azithromycin

c) Metronidazole + Fluconazole

d) Fluconazole

Correct Answer - C

Ans. c. Metronidazole + Fluconazole

**22. A lady develops pigmentation on the bridge of nose and cheeks on exposure to sunlight. The most likely diagnosis is**

a) Chloasma

b) Systemic lupus erythematosus

c) Photodermatitis

d) Rosacea

Correct Answer - A  
Ans. a. Chloasma

**23. Multiple hypoaesthetic, hypopigmented macules on right lateral forearm with numerous acid fast bacilli is indicative of**

a) Tuberculoid leprosy

b) Lepromatous leprosy

c) Indeterminate leprosy

d) Borderline leprosy

Correct Answer - D

Ans. d. Borderline leprosy

Multiple hypoaesthetic, hypopigmented macules on right lateral forearm with numerous acid-fast bacilli is indicative of borderline lepromatous leprosy.

Multiple lesions and numerous AFB bacilli indicate either lepromatous or borderline lesions, and hypoesthesia and hypopigmentation narrows it further to borderline (actually borderline lepromatous), as sensation is normal in lepromatous leprosy

**24. A 60-year old male presented with discoloration, thickening and tunneling of 2 fingernails and one toenail. Which of the following will clinch the diagnosis at the earliest**

a) Wood's lamp examination

b) KOH mount

c) Slit smear (split skin smear)

d) Gram stain

Correct Answer - B

Ans. b. KOH mount

Discoloration, thickening and tunneling of two fingernails and one toenail is suggestive of onychomycosis or Tinea unguum. The most important test to diagnose this is nail scraping for KOH

**Tinea unguum (Onychomycosis)**

- Tinea unguum is the ringworm of nail, usually caused by T rubrum.
- It causes yellowish discoloration of the nails along with thickening of the nails.
- *The most important test to diagnose this is a nail scraping for KOH.*

Type	Affected body part	Causative agent
Tinea corporis (glabrosa)	Skin of body or limbs(usually non hairy) Groin, perineum	T. verrucosum <sup>Q</sup>

Tinea cruris (Dhobi/jack itch)	penis, thighs, scrotum (least and late involvement)	Trichophyton rubrum <sup>Q</sup> E. floccosum
Tinea capitis	Scalp	Microsporum canis (MC) <sup>Q</sup> T. schoenleini, T. tonsurans T. rubrum <sup>Q</sup>
Tinea pedis (Athlete's foot)	Feet, MC 4th web space	T. mentagrophyte, E. floccosum
Tinea manuum	Palms	T. rubrum <sup>Q</sup> T. rubrum <sup>Q</sup>
Tinea unguum (Onychomycosis)	Nail plate > nail bed <sup>o</sup>	T. mentagrophyte, E. floccosum

**25. A 24-year old male had multiple, small hypopigmented macules on the upper chest and back for last three months. The macules were circular, arranged around follicles and many had coalesced to form large sheets. The surface of the macules showed fine scaling. He had similar lesions one year ago which subsided with treatment. The most appropriate investigation to confirm the diagnosis**

a) KOH preparation

b) Slit skin smear

c) Tzanck test

d) Skin biopsy

Correct Answer - A

Ans. a. KOH preparation

Multiple, small hypopigmented macules on the upper chest and back which are circular, arranged around follicles coalesced to form large sheets with fine scaling are seen in Pityriasis versicolor. The most appropriate investigation to confirm the diagnosis is KOH preparation

## 26. Which of the following is associated with sun exposure

a) Actinic keratosis

b) Seborrhoeic keratosis

c) Sebaceous cell carcinoma

d) Syringoma

Correct Answer - A

Ans. a. Actinic keratosis

Actinic keratosis or solar keratosis is a reflection of abnormal skin cell development due to exposure to ultraviolet radiation

### **Actinic/Solar Keratosis**

- Premalignant lesions occurring on the sun exposed part of the body in persons of fair complexion.
- It is raised, pink or grey, scaling or warty hyperkeratotic plaque or papule
- 0.2% transform to squamous cell carcinoma

### **Treatment:**

- Liquid nitrogen application is therapy of choice.
- 5-FU for multiple superficial actinic keratosis.
- Imiquimod can also be used

**27. Which of the following is not seen in scoline apnea**

a) It is due to succinylcholine

b) It can be inherited

c) Patients usually do not die of scoline apne they are properly managed

d) It occurs due to deficiency of cholinesterase

Correct Answer - D

Ans. d. It occurs due to deficiency of cholinesterase

**28. A 40-year female has to undergo incisional surgery under general anesthesia. She complains of awaken during her past cesarean section. Which of the following monitoring techniques can be used to prevent such awareness?**

a) Color Doppler

b) Bispectral index monitoring

c) Transesophageal echocardiography

d) Pulse plethysmography

Correct Answer - B

Ans. b. Bispectral index monitoring

Use of the bispectral index (BIS), developed from a processed electroencephalogram, has been reported to decrease the incidence of anesthesia awareness when the BIS value is maintained below

***Bispectral Index Scale (BIS)***

- It is based on the principle of EEG°
- Bispectral imaging analyses EEG data and quantitate anesthetic effects on the brain, specifically the hypnotic component.
- *It is a composite numerical index, which represents a dimensionless numerical value that has been correlated with the patient's current hypnotic state or depth of anaesthesia and provides some assurance that paralyzed (anesthetized) patient is also asleep (unaware*
- BIS analysis may reduce chances of patient awareness during anesthesia. It may also reduce resource utilization because lesser

drug is required to ensure amnesia, facilitating a faster wake up time and a shorter stay in recovery room.

### **The BIS number decreases with increasing hypnosis**

- The BIS is derived from complex EEG analysis incorporating weighted information derived from the degree of burst suppression, spectral (b band) power and the bispectrum coherence<sup>Q</sup>.
- To make the EEG signals easier to interpret it uses 2 principles which are, which are, spectral analysis (power) and fast fourier analysis.<sup>Q</sup>
- It uses 3 EEG electrodes placed on frontal, parietal and temporal lobes<sup>Q</sup>
- IS is used to monitor: Intraoperative awareness<sup>o</sup>, Depth of anesthesia<sup>Q</sup>
- Its value ranges from 0-100 (0: coma; 100: awake)<sup>Q</sup>

#### **BIS Awareness Level and Depth of Anesthesia**

100 Awake (memory intact, respond to verbal command)

85-  
65 Sedation

65-  
40 General anesthesia (no awareness, deep hypnosis, memory function lost)

<40 Cortical suppression becomes discernible, increasing burst suppression

0 Cortical silence (isoelectric), deeply anesthetized

- Target intra-operative BIS: 40-60<sup>Q</sup>
- Target sedation BIS: 60-80<sup>Q</sup>

### **Methods used for Assessing Consciousness Intraoperatively**

- Bispectral index (BIS) analysis
- Narcotrend monitor (Monitor Technique)
- Patient state index (PSI, Physiometrix) is based on quantitative EEG signal relationship between frontal and occipital brain regions
- Entropy monitors measure *state entropy* (response over the range of 0.8-32 Hz, reflecting EEG dominant spectrum and *response entropy* (response over range of 0.8-47 Hz, reflecting both EEG and EMG spectra)

- Stimulus-response technique of auditory evoked potential

**29. A 32-year old male with no past medical history is brought to the emergency department after being injured in a bomb blast. On examination he is suspected to have a splenic injury and is supposed to undergo an emergency laparotomy. Which of the following is the ideal anaesthetic agent of choice?**

a) Remifentanil

b) Morphine

c) Etomidate

d) Halothane

Correct Answer - C  
Ans. c. Etomidate

**30. The most important constituent in soda lime for reabsorption of CO<sub>2</sub> in a closed circuit is:**

a) Sodium hydroxide

b) Barium hydroxide

c) Calcium hydroxide

d) Potassium hydroxide

Correct Answer - C  
Ans. c. Calcium hydroxide

**31. A 10-year old child is undergoing squint surgery. He suddenly developed increased heart rate, arrhythmia, high fever, metabolic and respiratory acidosis on arterial blood gases and elevation of end tidal CO<sub>2</sub>. Which of the following would be the first agent of choice in the management of this condition?**

a) Dantrolene

b) Paracetamol

c) Procainamide

d) Sodium bicarbonate

Correct Answer - A

Ans. a. Dantrolene

Sudden development of increased heart rate, arrhythmia, high fever, metabolic and respiratory acidosis on arterial blood gases and elevation of end tidal CO<sub>2</sub>, in a child undergoing squint surgery is highly suggestive of malignant hyperthermia. Dantrolene would be the first agent of choice in the management of malignant hyperthermia.

"Malignant Hyperthermia: Dantrolene is the only drug effective in reversing the symptoms and preventing the episode.

### 32. The laryngoscope shall be held in which hand by a right handed person for the purpose of intubation?

a) Right hand

b) Left hand

c) Either

d) Neither

Correct Answer - B

Ans. b. Left hand

laryngoscope should be held in left hand by a right-handed person, for the purpose of intubation.

"Laryngoscope used for intubation is also called as Macintosh's laryngoscope. It has to be held in the anesthetist's or surgeon's left hand for purpose of intubation so that the endotracheal tube can be held in right hand to insert in in trachea. Dexterity of surgeon or anesthetist does not matter in conventional laryngoscope as the curvature of blade is in such a manner that it has to be held in left hand."

"Laryngoscopes are a left-handed instrument, with the operator's right hand used to pass the tube. Ever since the early pioneers described the procedure it was appreciated that tongue displacement to one side would facilitate reaching the larynx. Since an operator would want their dominant hand free for instrumentation, the laryngoscope became, by default, a left-handed instrument (appropriate since 85% of the population is right hand dominant)."-  
[http://www. airwaycam.com/laryngoscope-blade-design.html](http://www.airwaycam.com/laryngoscope-blade-design.html)

### 33. Which of the following is not a type of lichen planus?

a) Lichen scrofulosorum

b) Lichen planopilaris

c) Lichen hypertrophica

d) Lichen pigmentosa

Correct Answer - A

Ans. a. Lichen scrofulosorum

Lichen scrofulosorum is a type of cutaneous TB, not the lichen planus.

`Lichen scrofulosarum is a type of cutaneous TB. It is the most common type of tuberculide (hypersensitivity TB) seen around hair follicles.'

`Lichen scrofulosorum (also known as 'Tuberculosis cutis lichenoides) is a rare tuberculid that presents as a lichenoid eruption of minute papules in children and adolescents with tuberculosis. The lesions are usually asymptomatic, closely grouped, skin-colored to reddish-brown papules, often perifollicular and are mainly found on the abdomen, chest, back, and proximal parts of the limbs. The eruption is usually associated with a strongly positive tuberculin reaction.'

#### Clinical variants of Lichen Planus

Annular	Lichen planus pemphigoides	Follicular (LichenplanopilarisQ)
Hypertrophie	Lichen planuspigmentosusQ	Lichen planus follicularis decalvans
Atrophic	Erythrodermic	Actinic

... ..

Ulcerative Linear

Bullous

Inverse

**34. A 25-year-old sexually active woman complains of purulent discharge and dysuria after having intercourse with a new partner. Most sensitive investigation for diagnosis:**

a) Grams staining

b) Bacterial growth or culture on selective media

c) Wet mount

d) Nucleic Acid Amplification Test (NAAT)

Correct Answer - D

Ans. d. Nucleic Acid Amplification Test (NAAT)

Most sensitive investigation for diagnosis in a 25 year old sexually active woman who complains of purulent discharge and dysuria after having intercourse with a new partner (sexually transmitted urethritis) is Nucleic Acid Amplification Test (NAAT).

`Gonorrhoea and chlamydial infection should be sought by specific tests (e.g., NAATc on the first 10 mL of voided urine). Among dysuric women with sterile pyuria caused by infection with *N. gonorrhoeae* or *C. trachomatis*, appropriate treatment alleviates dysuria.'-Harrison 18/e p1098

`However, an increasing proportion of men with symptoms and/or signs of urethritis are simultaneously assessed for infection with *N. gonorrhoeae* and *C. trachomatis* by 'multiplex' NAAR of first-voided urine. Culture or NAAT for *N. gonorrhoeae* may be positive when Gram's staining is negative; certain strains of *N. gonorrhoeae* can result in negative urethral Gram's stains in up to 30% of cases of urethritis.'- Harrison 18/e p1098

`All men with suspected urethritis should be tested for gonorrhoea and chlamydia. The availability of sensitive and specific testing

### **Sexually Transmitted Urethritis**

- Sexually transmitted urethritis can be gonococcal or Non-gonococcal

#### **Investigation:**

- **PCR: Rapid, specific and sensitive** but expensive to use.
- Multiplex PCR available to detect concomitant *T. pallidum*, *H. ducreyi*, HSV infection.

#### **Serology:**

- Serological screening for IgM antibodies is useful but presence of elevated levels of IgM antibodies does not differentiate between present and past infection.
- Recent point of care test based on glycoprotein G has high sensitivity and specificity

**35. A 23-year-old male complains of recurrent scaly lesions on glans penis. It always occurred at the same site and healed with slight hyperpigmentation. What is the most likely diagnosis?**

a) Fixed drug eruption

b) Herpes

c) Candida balanoposthitis

d) Behcet's disease

Correct Answer - A  
Ans. a. Fixed drug eruption

**36. A 24-year-old girl presented with complains of acne. On examination, multiple nodules, cysts and intercommunicating sinuses were seen. How will you treat her?**

a) Acitretin

b) Oral isotretinoin

c) Doxycycline

d) Tazorotene

Correct Answer - B

Ans. b. Oral isotretinoin

Oral isotretinoin is the preferred treatment option for acne in a 24-year old girl with multiple nodules, cysts and intercommunicating sinuses

### 37. Panniculus adiposus is seen in:

a) Eyelid

b) Scrotum

c) Penis

d) Orbit

Correct Answer - D

Ans. d. Orbit

The superficial fascia is a continuous sheet, of areolar tissue which underlies the skin of the whole body. It is closely adherent to the cutis vera, and is sometimes termed panniculus adiposus, from the fact that, except beneath the skin of the eyelids, penis, and scrotum it is usually more or less impregnated with fat.

#### **Fascia**

- Beneath the skin there are two (or in some regions three) layers of tissue which require consideration in relation to the muscular system:
- Superficial fascia (panniculus adiposus)
- Deep fascia
- In animals, the panniculus carnosus (rudimentary in man, represented chiefly by the platysma in the neck).

#### **Fascia Superficialis (Superficial fascia)**

- The superficial fascia is a continuous sheet, of areolar tissue, which underlies the skin of the whole body.
- It is closely adherent to the cutis vera, and is sometimes termed panniculus adiposus, from the fact that, except beneath the skin of the eyelids, penis, and scrotum it is usually more or less impregnated with fate.
- The cutaneous vessels and nerves ramify in this fascia; and its deep

surface, membranous in character, is in loose connection with the subjacent deep fascia

**Fascia profunda (Deep fascia)**

- Underneath the skin and superficial fascia is a fibrous membrane, bluish white in colour, devoid of fat, and in closest relation to skeleton, ligaments, and muscles.
- This is the deep fascia.
- It covers, invests, and in some cases forms the means of attachment of the various muscles

**38. A 25-year old girl presented with erythematous papules on the face as seen in the figure. The lesions were exacerbated on excessive sweating, sun exposure and emotional disturbance. What is the next best investigation?**

a) Acne vulgaris

b) Scabies

c) Lupus erythematosus

d) Acne Rosacea

Correct Answer - D

Ans. d. Acne Rosacea

Most sensitive investigation for diagnosis in a 25-year old sexually active woman who complains of purulent discharge and dysuria after having intercourse with a new partner (sexually transmitted urethritis) is Nucleic Acid Amplification Test (NAAT),

'Gonorrhoea and chlamydial infection should be sought by specific tests (e.g., NAATS on the first 10 mL of voided urine).

Among dysuric women with sterile pyuria caused by infection with *N. gonorrhoeae* or *C. trachomatis*, appropriate treatment alleviates dysuria.'

**39. A 65-year old male presented with tense blisters associated with itching on normal looking skin with urticarial plaques as seen in the figure. What is the most likely diagnosis?**

a) Bullous pemphigoid

b) Pemphigus vulgaris

c) Dermatitis herpetiformis

d) IgA pemphigus

Correct Answer - A

Ans. a. Bullous pemphigoid

The most likely diagnosis in this 65-year old male with tense blisters on normal looking skin associated with itching and urticarial plaques as seen in the figure are bullous pemphigoid.

**40. A male patient presented with hypopigmented patch at the back as shown in the picture. What is the next best investigation to be done in this case?**

a) KOH mount

b) Grattage test

c) Patch test

d) Skin sensation testing

Correct Answer - A

Ans. a. KOH mount

. Examination of scales in looh KoH- shows Spaghetti and meatball appearanceo . Wood camp examination: Apple green fluorescene.

. Skin surface biopsy

**41. A young 8 years old boy with multiple, small, pin point, shiny, papular lesions on dorsal aspect of hand, forearms and his penis also. Diagnosis is:**

a) Molluscum contagiosum

b) Scabies

c) Lichen planus

d) Lichen nitidus

Correct Answer - D

Ans. d. Lichen nitidus

A young 8 years old boy with multiple, small, pin point, shiny, papular lesions on dorsal aspect of hand, forearms and his penis also. Diagnosis is Lichen nitidus.

**42. A middle-aged male presents with multiple painful blisters on a erythematous base along the T3 dermatome on the trunk. Which of the following etiological agent is most likely to be implicated?**

a) Varicella zoster

b) Herpes simplex

c) Human papilloma virus

d) Pox virus

Correct Answer - A

Ans. a. Varicella zoster

### **Herpes Zoster**

- Caused by Varicella Zoster (chicken pox) virus<sup>Q</sup> one attack gives life long immunity
- Thoracic nerves (intercoastal nerves)<sup>Q</sup>, ophthalmic division of trigeminal nerve and other spinal nerves are most commonly affected<sup>Q</sup>

### **Pathology:**

- Ballooning is characteristic<sup>Q</sup>

### **Clinical Features:**

- Prodrome of segmental pain begins 1-4 days before the eruption<sup>Q</sup>, erythema and edema is rapidly followed by appearance of grouped vesicles unilateral and in a segmental distribution (MC thoracic dermatome)<sup>Q</sup>, mucous membrane within the affected dermatome may be involved

- Unilateral vesicular eruption within a dermatome associated with severe pain
- The dermatome from T3 to L3 are most frequently involve

**Complications:**

- Post-herpetic neuralgia<sup>o</sup> (persistent neuralgic pain)
- Corneal ulcer and scarring (zoster of ophthalmic division of trigeminal nerve), eye involvement is indicated when vesicles are present on the side of nose- Hutchinson's sign<sup>Q</sup>

**Herpes Zoster**

**Variants:**

- Ramsay Hunt Syndrome: H. zoster involving sensory branch of facial nerve<sup>Q</sup>
- Zoster ophthalmicus: H. zoster involving ophthalmic division of trigeminal nerve .<sup>Q</sup>

**Herpes simplex:**

- Painful, cluster of vesicles on face
- Recurrent
- Two types:
- Type I: Oral lesions seen in childhood
- Type II: Genital lesions (is STD and carcinogenic) in young adults usually after sexual contact.

**43. All of the following drugs can lead to SLE like reaction except?**

a) Hydralazine

b) Penicilline

c) Isoniazid

d) Sulphonamide

Correct Answer - B

Ans. b. Penicilline

**44. A 60 years old man presented with itchy tense blisters on normal looking skin and urticarial rash. Investigation done for the diagnosis:**

a) Direct immunofluorescence

b) Indirect immunofluorescence

c) Histopathology

d) Cytopathology

Correct Answer - A

Ans. a. Direct immunofluorescence

A 60 years old man presented with itchy tense blisters on normal looking skin and urticarial rash. This patient is suffering from pemphigoid. Investigation done for the diagnosis direct immunofluorescence.

**45. A 7 years old boy presented with painful boggy swelling of scalp, multiple sinuses with purulent discharge, easily pluckable hairs and lymph nodes enlarged in occipital region. Which one of the following would be most helpful for diagnostic evaluation?**

a) Bacterial culture

b) Biopsy

c) KOH mount

d) Patch test

Correct Answer - C  
Ans. c. KOH mount

**46. The Ridley -Jopling classification for leprosy is based on which of the following parameters?**

a) Clinical, bacteriological, immunological

b) Histopathological, clinical, therapeutic

c) Histopathological, epidemiological, therapeutics

d) Histopathological, clinical, epidemiological

Correct Answer - A

Ans. a. Clinical, bacteriological, immunological

Ridley-Jopling Classification for Leprosy is based on Clinical (skin and nerve involvement), bacteriological (bacteriological/morphological index in skin and nasal smears) and immunological criteria (Lepromin test).

## 47. Treatment options for acne vulgaris is/are ?

a) Topical erythromycin

b) Oral Minocycline

c) Isotretinoin

d) All the above

Correct Answer - D

**Ans. is 'd' i.e., All the above**

**Drugs used for treatment of Acne**

**Topical**

- Comedolytics : - Act by removing follicular plug, thereby reopen pilosebaceous ostia. Comedolytics are ; Retinoic acid, Adapalene, Azelaic acid, Tazarotene.
- Antibiotics : - Decrease bacterial population and have anti-inflammatory effect. Topical antibiotics for acne are ; Erythromycin, clindamycin, Benzoyl peroxide.

**Systemic**

- Antibiotics : - Decrease bacterial population and have anti-inflammatory effect. Systemic antibiotics for Acne vulgaris are; Tetracycline, minocycline, doxycycline, Erythromycin, Roxithromycin, Cotrimoxazole, Dapsone.
- Retinoids [Isotretinoin (11-cis retinoic acid)] :- Removes follicular obstruction, and also suppresses sebum secretion (Sebostatic).
- Antiandrogens : - Decrease sebum secretion by decreasing androgens. Examples; Cyproterone, Ethinylestranol, Spironolactone. Cyproterone acetate (along with ethinylestranol) is particularly useful in teenage girls with mensural irregularities.

## 48. All are true about skin except:

a) Both dermis & ectoderm are derived from ectoderm

b) Skin accounts for total of 15% of body weight

c) Most of the cells in skin are keratinocytes derived from ectoderm

d) Dermis is made up of type1 and type 3 collagen in 3:2 ratio

Correct Answer - A

Ans:A. Both dermis & ectoderm are derived from ectoderm.

- True fact: Dermis derived from mesoderm and epidermis from ectoderm.

**49. An 8 years old child has left sided flank pain and mental retardation. On ultrasound, a hyperechoic lesion in the right kidney and multiple lesions in the liver are noted. CT examination of the abdomen revealed -50 to -80 HU density of these lesions. The most probable diagnosis is:**

a) Tuberos sclerosis

b) Hereditary hemangioblastoma

c) Autosomal recessive polycystic kidney disease

d) von Hippel-Lindau syndrome

Correct Answer - A

Answer- A (Tuberos sclerosis)

- AML is a benign clonal neoplasm consisting of varying amounts of mature adipose tissue, smooth muscle and thick-walled vessels.

**50. A man presents with a 6-month history of recurrent oral ulceration. He has yellowish ulcerations on his lip which are erythematous, with a central halo and nodular lesions on his shin. Diagnosis is:**

a) Behcet's disease

b) Pemphigus vulgaris

c) Fixed drug eruption

d) Herpes labialis

Correct Answer - A

Ans. a. Behcet's disease (ref- Harrison 19/e Pg 2194, 18/e Pg 2801)

- Diagnosis of a patient who presents with a 6-month history of recurrent oral ulceration, yellowish ulcerations on the lip, erythematous, with a central halo and nodular lesions on shin is Behcet's disease.
- Associated with HLA-B59
- Disease affect young patients; Both males and females are equally affected

**51. A 28-year-old patient of neurocysticercosis develops generalized peeling of skin all over except palms and soles starting one month after taking anti-epileptics. What is the most probable diagnosis?**

a) Fixed drug eruption

b) Pemphigus

c) Steven Johnson syndrome

d) TEN

Correct Answer - D

Ans: D. TEN

(Ref Neena Khanna 4/e p83, 174)

- Probable diagnosis is toxic epidermal necrolysis.
- **Toxic epidermal necrolysis (TEN/ Lyell's syndrome:**
  - Rare, life-threatening skin condition that is usually caused by a reaction to drugs.

**Etiology of Epidermal Necrolysis**

<b>Drugs</b>	<b>Miscellaneous</b>	<b>Idiopathic</b>
Anticonvulsants: Carbamazepine, phenytoin barbiturates, lamotrigine Chemotherapeutic agents: sulfonamides, penicillin NSAIDs: Butazones, oxicams Others: Allopurinol,	SSE, GVHD, Lymphoreticular malignancies Infections (Mycoplasma pneumoniae, herpes virus infection)	5% of patients

nevirapine

## 52. Which type of oral candidiasis does not presents with white patch?

a) Chronic atrophic candidiasis

b) Chronic hyperplastic candidiasis

c) Chronic mucocutaneous candidiasis

d) Pseudomembranous candidiasis

Correct Answer - A

Ans: A. Chronic atrophic candidiasis

- Chronic erythematous (atrophic) candidiasis appears as a red, raw-looking lesion instead of a white patch seen in all other types.

**Erythematous (atrophic) candidiasis:**

- Appears as a red, raw-looking lesion.

**Subtypes of erythematous candidiasis:**

- Denture-related stomatitis, angular stomatitis, median rhomboid glossitis & antibiotic-induced stomatitis.
- Since they are commonly erythematous/atrophic.
- Precede pseudomembrane formation,.
- Left when membrane is removed, or arise de novo.

**Tongue:**

- Loss of lingual papillae, leaving a smooth area on tongue.
- Occurs on dorsum of tongue in long-term corticosteroids or antibiotic patient.
- But occasionally it can occur after only a few days of using a topical antibiotic.
- This is usually termed 'antibiotic sore mouth/stomatitis' because it is commonly painful as well as red.

**53. A man presents with rashes on face and also complains of decreased mental function. He is also having few macular lesions on his skin. On CT scan, intracranial calcification was seen. His wife is normal. His 10-year old daughter is also normal but his 6-year old son is also having similar skin lesions. What would be the most likely diagnosis?**

a) Neurofibromatosis-1

b) Neurofibromatosis-2

c) Xeroderma pigmentosum

d) Autosomal dominant inheritance

Correct Answer - D

Answer- D. Autosomal dominant inheritance

- Clinical findings like rashes on face, decreased mental function with macular lesions on the skin and intracranial calcification on CT scan is highly suggestive of tuberous sclerosis, which has an autosomal dominant condition.

**54. A patient presents with focal alopecia areata. All of the following are associations of alopecia areata except:**

a) Nail pitting

b) Atopy

c) Geographic tongue

d) Exclamatory mark

Correct Answer - C

**Answer- C. Geographic tongue**

- Geographic tongue (also known as benign migratory glossitis, erythema migrans lingualis, glossitis areata migrans, and transitory benign plaques of the tongue). An inflammatory condition of the mucous membrane of the tongue, usually on the dorsal surface.

**55. Postherpetic neuralgia is defined as pain lasting beyond how many weeks?**

a) 1 week

b) 2 weeks

c) 3 weeks

d) 4 weeks

Correct Answer - D

**Ans: D. 4 weeks**

(Ref Fitzpatrick 6/e p2302, 7/e p490-493, 1873-1898; Rooks 8/e p33.14-33.22; Roxburgh 18/e p52-54).

**Post-herpetic neuralgia (PHN):**

- Most common & important neurologic complications of herpes zoster.
- Defined as pain after the rash has healed or pain 1 month or 3 months after rash onset.
- Best answer would be 4 weeks.

**56. A 24 years old female presented with patchy hair loss in the right temporal and occipital region. Examination revealed non- scarring alopecia with multiple small broken hairs. Scrapings from scalp showed mild inflammation, peri-follicular hemorrhage and surrounding mild lymphocytic infiltration. What is the most likely diagnosis?**

a) Alopecia areata

b) Androgenic alopecia

c) Loose anagen hair

d) Trichotillomania

Correct Answer - D

**Ans: D. Trichotillomania**

(Ref: Rooks 8/e p55, Fitzpatrick 6/e p/55).

- Patchy hair loss in the right temporal and occipital region in a 24-years-old female non- scarring alopecia with multiple small broken hairs and mild (sparsity) of a perifollicular inflammatory infiltrate is highly suggestive of trichotillomania.

**57. A 35 years old male comes with complain of baldness. On examination, well-defined bald patches were seen with no scarring. Small broken hairs were seen in the surrounding area. What is the likely diagnosis?**

a) Androgenetic alopecia

b) Alopecia areata

c) Anagen effluvium

d) Telogen Effluvium

Correct Answer - B

**Ans: B. Alopecia areata**

(Ref Rooks 8/e p66.13, Fitzpatrick 6/e p732)

- Findings are highly suggestive of alopecia areata.
- The scalp appears normal in alopecia areata.
- In affected areas, anagen is abruptly terminated prematurely and affected hairs move prematurely into telogen, with resultant often precipitous hair shedding.
- The near pathognomonic 'exclamation point' hairs may be present, particularly at the periphery of areas of hair loss.
- These short broken hairs, whose distal ends are broader than the proximal ends, illustrate their inherent sequence of events: follicular damage in anagen and then a rapid transformation to telogen. White or graying hairs are, frequently spared and probably account, in cases of fulminant alopecia areata, for the mysterious phenomenon of 'going gray overnight.'

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## 58. Treatment of choice for erythrodermic psoriasis:

a) Methotrexate

b) Corticosteroids

c) Coal tar topical

d) Topical steroids

Correct Answer - A

**Ans: A. Methotrexate**

(Ref Fitzpatrick 6/e p2676)

- Methotrexate or oral retinoids (Acitretin) - DOC for erythrodermic psoriasis management.
- Current use of methotrexate to treat psoriasis is most common in patients with severe or refractory plaque-type disease that requires systemic treatment.
- It is also very useful for erythrodermic and pustular psoriasis, as well as psoriatic arthritis.

**59. A 45 years old male presents with itchy papules over face, neck and V area of chest for the last three years, which are exacerbated in summers and improved in winters. What test will you do to confirm diagnosis?**

a) Patch test

b) Prick test

c) IgE levels

d) Skin biopsy

Correct Answer - A

**Ans: A. Patch test**

(Ref: Rooks 8/e p26.93, Fitzpatrick 6/e p1451, 1309)

- The clinical picture mentioned above is suggestive of air-borne contact dermatitis, which is a type of allergic contact dermatitis.
- Most common source is Parthenium exposure and it leads to dermatitis involving the exposed parts, i.e. Face, upper neck, cubital and popliteal fossa.
- The only useful and reliable method for the diagnosis of allergic contact dermatitis remains the patch test.

**60. A 12 years old boy came with complaints of 4 hypopigmented patches on back and on left arm. The patches had loss of sensation. Which of the following is the treatment for this case?**

a) Rifampicin (450 mg) + Dapsone (50 mg) + Clofazimine (150 mg) monthly and 50 mg daily

b) Rifampicin (600 mg) + Dapsone (150 mg) only

c) Rifampicin (450 mg) + Dapsone (50 mg) + Clofazimine (150 mg) monthly and 50 mg alternate days

d) Rifampicin (600 mg) + Dapsone (150 mg) + Clofazimine (300 mg) monthly and 50 mg daily

Correct Answer - C

Answer- C. Rifampicin (450 mg) + Dapsone (50 mg) + Clofazimine (150 mg) monthly and 50 mg alternate days

- The clinical history fits the patient into multibacillary leprosy and requires extensive multidrug therapy for 12 months.
- Since the patient is aged 12 years, doses are Rifampicin (450 mg) \* Dapsone (50 mg) + Clofazimine (150 mg) monthly and 50 mg alternate days.

**61. A young female presented with vaginal itching and green frothy genital discharge. Strawberry vagina is seen on examination. What will be the drug of choice?**

a) Doxycycline

b) Oral fluconazole

c) Metronidazole

d) Amoxicillin

Correct Answer - C

Answer- C. Metronidazole

History of vaginal itching and green frothy genital discharge in a young female with strawberry vagina on examination is highly suggestive of Trichomoniasis. The drug of choice for Trichomoniasis is metronidazole.

**Treatment:**

- DOC: Metronidazole (tinidazole is also effective)
- All sexual partners must be treated concurrently to prevent reinfection

## 62. Which component of cement causes allergic contact dermatitis??

a) Cobalt

b) Nickel

c) Iron

d) Chromium

Correct Answer - D

**Ans : D: Chromium**

- Most common allergen is hexavalent chromium salts.
- Allergic contact dermatitis more than irritant contact dermatitis.
- Level of exposure needed for allergic contact dermatitis 100-400 ng/cm<sup>2</sup>.
- Tartarate, glycine, silicone, dapson, ferrous sulphate causes conversion from chromium (VI) to chromium (III), which is less allergenic.

### 63. Which Nerve biopsy is taken to diagnose neuritic leprosy?

a) Median Nerve

b) Ulnar Nerve

c) Radial Cutaneous Nerve

d) Sural nerve

Correct Answer - C

**Ans: C: Radial Cutaneous Nerve**

*Ref: Kumar B, Dogra S. ch- 15, Case definition and clinical types of leprosy, pg. 259. IAL Textbook of leprosy. 2d ed,*

- *Ref: Ponnaiya J. Chapter 19: Laboratory diagnosis, pg. 285. AL Textbook of Leprosy, 7d ed.,*
- *Ref: Rao PN, Suneetha S. Pure neuritic leprosy: Current status and relevance Indian J Dermatol Venereol Leprol 2016; 12: 252-61).*
- Pure neuritic Hansen is characterised by an area of sensory loss along the distribution of an involved nerve trunk with or without motor deficit.
  - In the absence of any Skin patch.
- The suitable nerves include supraorbital branch of the fifth cranial nerve, supraclavicular nerve, great auricular nerve in the neck, radial cutaneous nerve at the wrist, a cutaneous nerve of the forearm or thigh, sural nerve at the back of the leg or superficial peroneal nerve on the dorsum of the foot.
- The nerves usually chosen for biopsy are a branch of sural nerve at the level just above the ankle, or a branch of radial cutaneous nerve at the wrist region.

**64. A patient came with history of joint pain and fever for one week. For which the patient took NSAIDS following which he developed rash and hyperpigmentation on nose. What is the most likely diagnosis?**

a) Dengue

b) fixed Drug eruption

c) Chikungunya

d) melasma

Correct Answer - C

**Ans : C Chikungunya**

*Ref: Hypapigmqtdion and &ilangurwfetEn &hasnw A" An has Demaor 20 | 6;9 | :g60-l r.*

- Chikungunya fever (cF) is an acute febrile illness presenting with symptoms like intense asthenia, arthralgia, myalgia and headache and is caused by chikungunya virus (CV).
- Among the skin lesions, maculopapular rash is common, but seen in several viral illnesses, therefore, not useful in suspecting CF.
- Hyperpigmentation is a unique feature noted in CF.
- Hyperpigmentation associated with CF is macular and most commonly affects nose and cheeks.

**65. After sequential arrangement of blistering disorder starting from superficial to deep blisters, which is the deepest among these?**

a) IgA pemphigus

b) EBD

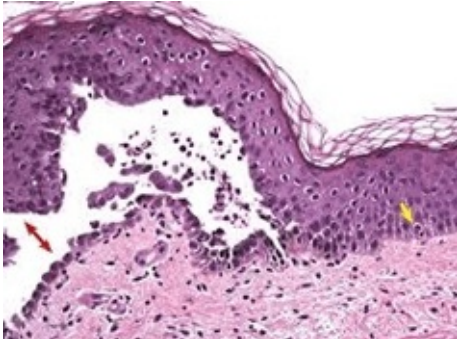
c) PV

d) Bullous pemphigoid+

Correct Answer - C

**Ans. C. PV**

- Pemphigus vulgaris (PV) is a rare and serious (potentially life-threatening) condition that causes painful blisters to develop on the skin and lining of the mouth, nose, throat and genitals.
- The **blisters are fragile and can easily burst open, leaving areas of raw unhealed skin that are very painful and can put you at risk of infection.**
- **H&E: Subepidermal bullae**



- **DIF: linear IgG and C3 deposition at the basement membrane zone**

## 66. Identify the condition below?

a) Tardieu spots

b) ITP

c) Vasculitis

d) DIC spots

Correct Answer - A

### **Ans. A. Tardieu spots**

- Asphyxial petechial haemorrhages do occur on the serosal surfaces of internal organs eg.heart and lung as shown in the pictures.
- They were first described by Tardieu in the 19th century and were named after him as tardieu spots.
- It were considered at that time and for a long period after as pathognomonic sign of asphyxial deaths.
- Such petechial haemorrhages do occur in deaths related to infections,blood coagulopathy disorders and micro emboli.
- It can also occur due to rupture of engorged capillaries in the dependent parts.
- It can also be noticed in some cases of natural deaths, so it is by no means are pathognomonic of asphyxial deaths.

**67. Identify the condition below and which of the following is its most characteristic microscopic finding?**

a) Intracellular inclusion bodies

b) Multinucleated cells

c) Subepithelial Bullae

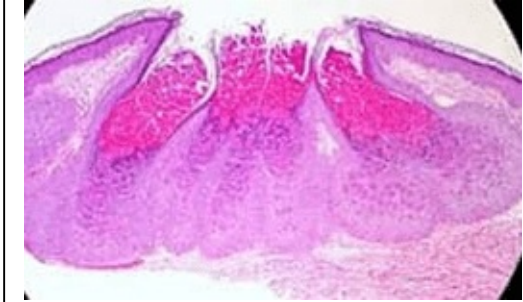
d) Councilman body

Correct Answer - A

**Ans. A. Intracellular inclusion bodies**

(Ref: Robbins 9/e p1176; Fitzpatrick 6/e p2347)

- All findings are highly suggestive of Molluscum contagiosum, which is caused by the poxvirus.
- Molluscum contagiosum:**
- On microscopic examination, lesions show cuplike verrucous epidermal hyperplasia. The diagnostically specific structure is the molluscum body, which occurs as a large, ellipsoid, homogeneous, cytoplasmic inclusion in cells of the stratum granulosum and the stratum corneum.
  - In H&E stain, these inclusions are eosinophilic in the blue-purple stratum granulosum and acquire a pale blue hue in the red stratum corneum.
  - Numerous virions are present within molluscum bodies.



## 68. Maculopapular rash is not seen in ?

a) Dengue

b) Rubella

c) measles

d) Zoster

Correct Answer - D

**Ans. D. Zoster**

**Maculopapular rashes are seen in:**

- \* Rubella
- \* Dengue(febrile phase)
- \* Measles
- \* Chikungunya (acute infectious phase)
- \* Erythema infectiosum
- \* Zika virus
- \* West Nile virus
- \* Infectious mononucleosis